

FACULTY/STAFF NEWSPAPER

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THE GEORGIA INSTITUTE OF TECHNOLOGY

Two professors named to the National Academy of Engineering

accorded to an engineer. Academy

made "important contributions to engineering theory and practice,

membership honors those who have

including significant contributions to

and practice," and

strated accomplishment in "the pioneering

of new fields of engineering, making major

advancements in tradi-

neering, or developing

or implementing innovative approaches to

engineering education."

Juang, a chaired profes-

sor in the School of

Computer Engineering

and Georgia Research

Scholar, for his contri-

butions to speech cod-

ing and speech recogni-

interest is in developing

mathematical methods

tices that make it possible for people to speak

with machines naturally

and to interact with

other people freely

and engineering prac-

tion. Juang's research

Alliance Eminent

Electrical and

The NAE recognized

tional fields of engi-

those who have demon-

Elizabeth Campell Institute Communications and Public Affairs

wo Georgia Tech faculty -Biing-Hwang Fred Juang and C.F. Jeff Wu -

can now add membership to the select National Academy of Engineering (NAE) to their growing lists of honors. Earlier this month, the NAE elected 76 new members and 11 foreign associates, bringing the membership to 2,174 and the number of foreign associates to 172. The election of Juang and Wu brings Georgia Tech's number of active NAE members to 25.

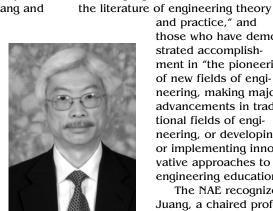
Don Giddens, dean of the College of Engineering, said, "A big part of a top-notch engineering program is having the very best professors, and I congratulate Professors Juang and Wu on their accomplishment. We are always looking for ways to become better, but having these two gentlemen acknowledged for their contributions to our discipline demonstrates both

the vitality of our programs and our commitment to providing the best possible learning experience for our students."

Election to the NAE is among the highest professional distinctions

NAE membership in academia:

Massachusetts Institute of Technology (110) Stanford University (82) University of California at Berkeley (70) The University of Texas at Austin (40) California Institute of Technology (30) University of Illinois at Urbana-Champaign (27) Georgia Institute of Technology (25)



B.H. Fred Juang

C.F. Jeff Wu

even though they are far apart. "The academies are

advisors to the nation on science, engineering and medicine," says Juang. "That probably means that I may have an additional duty as a citizen to offer my professional knowledge to help society. Being able to help is a good thing, and always enjoyable."

Juang came to Georgia Tech in 2002 from Avaya Labs Research, where he served as director of Multimedia Technologies Research. Previously, he was director of Acoustics and Speech Research at Bell Laboratories/Lucent Technologies from 1996-2001. He is the author of more than 165 publications and holds nearly 20 patents. Similarly, the NAE recognized Wu, a chaired professor in the School of

NAE continued, page 2

Scrutinizing technology's impact



Undergraduate students get a tour of a biomedical engineering laboratory as part of the McEver Program in Engineering and the Liberal Arts, which offers multidisciplinary courses that give students from science and the humanities the opportunity to explore the intersection of technology and society.

This seminar - "Biomedicine and Culture: The Bioengineered Body" - co-taught by Ken Knoespel in the School of Literature, Communication and Culture and Wendy Newstetter in the School of Biomedical Engineering, examines the social and ethical impact of research at this frontier of science and engineering.

Why do low numbers persist for women faculty of color?

Jane Sanders Research News

he numbers of women of color on academic faculties in the United States are very small and not increasing. There are even fewer such professors in the science, technology, engineering and mathematics fields. And the implications of this deficit are far-reaching, researchers suggest.

But some strategies for improvement exist at both the individual and institutional levels, and therein lies the hope that Associate Professor of Public Policy Cheryl Leggon delivered to her audience at the American Association for the Advancement of Science (AAAS) annual meeting in Seattle earlier this month.

"The numbers are grim across the board for males and females of color," Leggon said.

The situation has not improved much in the past decade. There have been only miniscule increases in faculty - especially women - of color in the science, technology, engineering and mathematics (STEM) fields, Leggon notes.

She cites several implications of these statistics. First is the effect of this deficit on students.

"The United States is becoming more diverse, and that is somewhat reflected in the student population in colleges and universities, but nowhere in the faculty population," explained Leggon, a sociologist. "That is problematic. What kind of message does it send to students? The implicit message is, 'You can't do this.' The absence of these groups does send a message."

Leggon cites two other important

Policy continued, page 3



"QUOTE-UNQUOTE"

"If we want to communicate with a machine as we would with a human, the basic assumptions underlying today's automated speech recognition systems are wrong. To have real human-machine communication, the machines must be able to detect the intention of the speaker."

-B.H. Fred Juang, a professor in the School of Electrical and Computer Engineering, on the future of speech recognition technology.

(United Press International)

"The idea is getting people together who aren't necessarily (focusing) their research towards cancer, but have a suspicion that it's right on the edge of something that could be relevant to cancer research."

-Alfred Merrill, professor in the School of Biology, on the Georgia Tech Cancer Research Council, an initiative intended to bring together researchers from different disciplines to share resources and knowledge.

(Atlanta Business Chronicle)



Calendar submissions e-mailed to michael.hagearty@icpa.gatech.edu, or faxed to Michael at 404-894-7214 must be sent at least 10 days prior to

or faxed to Michael at 404-894-7214 must be sent at least 10 days prior to desired publication date. Classified submissions are on a first come, first serve basis. For more information, call 404-894-8324.

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Institute Communications and Public Affairs Wardlaw Center 177 North Avenue Atlanta, Georgia 30332-0181

Georgia Tech is a unit of the University System of Georgia.

Monique Gupta has done it again. Winner of the prestigious Goldwater scholarship last spring, Gupta has captured the Churchill scholarship for one year of study at the University of Cambridge. Gupta plans to use her scholarship to get a Master of Philosophy in genetics before going to medical school.

Studying industrial and systems engineering at Georgia Tech, she said, has given her a solid foundation on which to base a career as a physician.

"In today's age of medicine, no physician can go forward without knowing more about the research that's being conducted," Gupta said. "By the time I start practicing, all these novel concepts we see today are going to be in use. I need to have a background in them."

Gene therapy, she believes, is one of the concepts. While at Tech, she participated in this type of research with Joseph LeDoux, professor in biomedical engineering at Georgia Tech and Emory University.

Gene therapy is a novel approach to treating diseases, and most of it is still in the experimental phase, Gupta said. The idea involves scientists identifying genes that cause a certain disease. "A new gene would be created in a lab, and doctors would use it to replace the gene that is causing the problem."

Diseases that can be helped by gene transfer include rheumatic arthritis and juvenile arthritis, she said.

Gupta is Tech's third student to win the scholarship, given out by the Winston Churchill Foundation of the United States. The award pays for one year of study at the University of Cambridge, plus a living allowance. Only 75 universities are allowed to nominate students for this honor. Full Name: Monique Gupta Age: 21

What I find most rewarding about being a student at Tech:

The most rewarding thing is the quality of people I get to interact with daily. At Georgia Tech, I am surrounded by an incredible mix of hard workers, geniuses, leadership gurus and selfless givers. I strongly believe that we are shaped to some degree by those around us, and college is a time where most of our development occurs. My association with the amazing people that Tech has to offer has allowed me to grow more into the person that I want to be.

What I find most challenging about being a student at Tech:

The biggest challenge is to have good grades and not let my schooling get in the way of my education. There is a huge demand on academic success at Tech, and sometimes it's easy to let our struggle for academic and leadership excellence interfere in our pursuits to develop into dynamic individuals.

Hobbies: Dancing (any kind – from swing to classical Indian), scrapbooking and recently I have learned how to play bridge.

The last book I read for pleasure: "Let's Roll," by Lisa Beamer

The CD in my stereo: I am a true Tech student in that I only listen to MP3s. I enjoy music uncategorized it's not unusual for a classical piano concerto to be followed by a country, pop or Indian song.

Another occupation I'd like to try: Open a scrapbook store, be a philanthropic event planner, be a medical ambassador to educate society about emerging biomedical practices, be a character at Disney World ... this list is endless!

Campus SPOTLIGHT

Monique Gupta



One talent I would most like to have: Singing. Singers possess the incredible ability to inspire and soothe people via their music.

My pet peeve is: My dependency on technology such as cell phones and e-mail. I often rely too much on these items and find myself in a bind when one crashes or is lost.

My most valued possession: Note cards. As all my family and friends can vouch for, I rely on note cards to organize every aspect of my life.

My day would not be complete without: A phone call from my family. I have been blessed with an amazing family that supports, encourages and inspires me in all my endeavors. I aspire to become as giving and even as intelligent as them.

My motto: Think Yellow (or in Tech's case: Think Gold) and Work Hard. It is imperative to always have a cheerful, optimistic (yellow) outlook on life while I am dedicating all my energy to what I am passionate about.

NAE, cont'd from page 1

Industrial and Systems Engineering, for conceiving and building modern systems of experimental design based on contemporary methods for parameter estimating to provide quality improvements. Wu is known for his work in modern Design of Experiments (DOE), which has helped western manufacturing industries greatly improve quality. With his election, Wu is one of the few statisticians in the NAE and the first academic statistician to receive this honor.

"I have spent more than half of my life in the United States," Wu said, "and as an immigrant I have always felt that this is the greatest country on earth for immigrants. I am grateful to many people and thankful to my many former students. The new recognition may make it easier for engineering faculty to accept and work with statisticians."

The NAE will hold an induction

ceremony for all new members in Washington, D.C., on Oct. 3.

For more information
B.H. Fred Juang users.ece.gatech.edu/~juang
C.F. Jeff Wu
www.isye.gatech.edu/~jeffw
National Academy of

Engineering www.nae.edu

Student orientation program goes under the microscope

David Terraso Institute Communications and Public Affairs

G eorgia Tech's student orientation program, FASET, is undergoing a voluntary review this semester that could result in major changes starting in fall 2005. John Stein, director of Success Programs, said the critique is a continuation of the process that was started during last spring's Psych 1000 review.

"I come from a tradition where various offices and programs do a self-analysis periodically. When I first arrived I knew I wanted to do something with Psych 1000. The next major program to review is FASET," said Stein.

The review committee is being coordinated by Amy Stalzer, assistant director of Success Programs and director of FASET.

"Anything like this that impacts all of us and the amount of time and money that goes into it, I think it's important that we review it and make sure it's meeting the students' needs," said Stalzer. "The hope is that each of these people will be going to their constituents collecting feedback

and ideas." Every part of the program is up for discussion, said Ray Vito, associate dean of the College of Engineering, who also serves on the review committee. "One faculty issue that comes up is how many times do we do FASET? Do we do several two-day experiences or just one weeklong experience," he said.

"There are a number of faculty who would like to be more involved, but the way it is stretched out over the summer makes it difficult. A lot of the faculty aren't here in the summer," said Associate Dean of Ivan Allen College Richard Barke, who was a FASET leader during the program's first year, in 1972.

"We are also looking at some ways the web could be used to provide some of the information we provide in the FASET

Policy, cont'd from page 1

reasons to increase diversity among STEM faculty. "It significantly enhances the quality of scientific research insofar as it expands the pool from which the United States draws its science talent," she said. "And it improves the quality of the educational experience for all students."

To improve conditions for women and men of color in the STEM fields in academia, strategies could be employed at both the individual and institutional levels, Leggon says.

At the undergraduate level, students should be informed about the range of opportunities they might have with a degree in a particular field. "For example, if you have biology majors from an underrepresented group, they are probably only thinking of a career in medicine," Leggon said. "They don't usually think of a research career in academe."

If undergraduate students do indicate an interest in a career in academe, it's important they know how to select a graduate school. "They shouldn't apply to an institution just because of its overall reputation," Leggon explained. "They should take into account the reputation of the specific department, program and faculty with whom they would like to work."

For junior faculty members, particularly in underrepresented



Cheryl Leggon, associate professor in the School of Public Policy, says the numbers of women faculty of color on academic faculties in the United States are very small and not increasing.

groups, administrators must make clear the criteria for getting tenure, Leggon says.

"Committee work is time consuming and does not substitute for publications," she added. "Also, because there are so few women faculty of color, students of color gravitate toward you. As a junior faculty member, you have to be careful it's not all consuming. Sometimes, it's difficult to make that judgment. It's a dilemma because junior women sessions," he added. "Students are more accustomed these days to receiving information electronically."

Any changes decided on in the review would most likely be implemented in fall semester 2005, said Stalzer. After that, Stein said, Success Programs will be taking a look at its oneto-one tutoring program.

The review of Psych 1000 last spring resulted in considerable changes to the freshman orientation class. Renamed GT 1000, the 15-week class will spend two weeks on each topic, rather than just one, allowing for a deeper exploration of subjects such as university culture, interpersonal communication, time management, leadership initiative, major and career research and career development skills.

The class will also have a new textbook, revised training for the instructors and will be more targeted to students' academic disciplines. The changes will take effect next fall.

of color are so passionate about mentoring. But to make the greatest impact in the long run, you have to get tenure first so you'll be here later."

Strategies to improve conditions for women of color and other underrepresented groups must also exist at an institutional level, Leggon says.

"You can't depend on the good will of a few people," she added. "I can't emphasize enough the importance of institutionalizing policies. If something is standard operating procedure, then it's one of the criteria on which performance is evaluated."

Programs such as the National Science Foundation's ADVANCE program for women faculty development are designed to transform institutional culture, Leggon says. At Georgia Tech, the ADVANCE program has sponsored sessions on how to get tenure, establish a research agenda and get published.

"We need programs like this within a given institution and, secondly, across institutions like in consortia," Leggon said. "Increasing faculty diversity benefits not only one college or university, but the entire society."

For more information... Cheryl Leggon www.spp.gatech.edu/people/ faculty/cleggon.htm

IN BRIEF:

Illegal parking at CRC

Last fall, a message was circulated regarding the parking situation outside the Campus Recreation Center. In effect, it said the Parking Office would not ticket cars on Tech Parkway from 5 p.m. to 9 a.m. during the week and anytime Saturday and Sunday. This plan was to continue until either the completion of the CRC or its adjacent parking deck, whichever comes first.

Last week, another message was being circulated via the CRC listserv, noting that this privilege was being abused — as well as becoming dangerous — by people parking cars in the median and on both sides of Tech Parkway. The message was sent as a reminder because the Parking Office has said it plans to tow anyone parking in a non-parking area, with recovery at the owner's expense.

To see previous postings, or to sign up for the CRC listserv, refer to: **https://lists.gatech.edu/sympa**.

Library to measure service quality with survey

Faculty and students will have an opportunity to receive a \$100 campus bookstore gift certificate if they participate in an upcoming survey for the Library and Information Center.

The Library, for the second consecutive year, will participate in the LibQUAL+ Survey, an important, national initiative to improve Library service. Beginning in mid-March, a random sample of 900 undergraduate students, 600 graduate students and 600 faculty members will be invited via e-mail to participate in the survey.

Its results will help Library administrators gauge the general attitudes of users plus their overall level of satisfaction with the Library's services. Participation in this 10-minute survey is voluntary and responses are completely confidential.

To see the 2003 survey results and the Library's responses and service improvements, go to www.library.gatech.edu/about_us/libqual/.

Library officials will send out invitations to participate in the survey in mid-March; the survey will be available online through early April 2004.

Undergraduate research opportunity

Georgia Tech (through the Microelectronics Research Center) is part of the NSF-sponsored National Nanotechnology Infrastructure Network (NNIN). Among its offerings, the NNIN program provides opportunities for undergraduate students to spend a summer working under a faculty member at one of the NNIN sites. This supplementary Research Experience for Undergraduates (REU) program is also sponsored by the NSF. The REU program is offered to students who attend an NNIN member school as well as students attending non-NNIN member schools. The REU is designed to send students for the summer to a school different from that which they are currently attending.

Interested students are encouraged to apply for this program, and faculty are urged to alert them to this opportunity. Applications and further information are available at **www.cnf. cornell.edu/cnf/REUhomepage.html**.



Arts & Culture

Feb. 27

The Ferst Center for the Arts welcomes Spoleto Festival USA Chamber Music with Charles Wadsworth at 8 p.m. Faculty and staff receive a 10 percent discount. For tickets, call 894-9600.

Brown Bags/Conferences/Lectures

Feb. 26

The School of Aerospace Engineering's Distinguished Lecture Series welcomes Lt. Col. Richard Clifford, director of space utilization at Boeing, on "The Moon and Beyond, 2004: An Assessment of the New Space Exploration Vision," at 11 a.m. in the Clary Theater. For more information, e-mail connie.irish@aerospace.gatech.edu.

Feb. 27

The Center for Paper Business and Industry Studies' Distinguished Lecture Series welcomes Richard Phillips, senior vice president of technology for International Paper, on "Imperatives for Manufacturing Success in the Paper Industry," at 11 a.m. in the Institute of Paper Science and Technology's Kress Auditorium. The lecture will also be broadcast on the Web. For more information, visit **www.cpbis.gatech.edu/dls2004**.

Mar. 1

The School of Industrial and Systems Engineering's Natural Systems Speaker Series welcomes Janine Benyus, author of "Biomimicry: Innovation Inspired by Nature," at 5:30 p.m. in the LeCraw Auditorium, College of Management Building. For further information, refer to **www.sustainable.gatech.edu**.

Mar. 3

The School of Psychology's Colloquium Series welcomes Daniel Schacter, professor of psychology at Harvard University, on "The Seven Sins of Memory: A Cognitive Neuroscience Perspective," at 3:30 p.m. in room 250, Coon Building. For more information, e-mail ch18@psych.gatech.edu.

Mar. 3

The College of Management's IMPACT Speaker Series welcomes Amy Lance, president of the Chastain Horse Park, at 4:30 p.m. in the LeCraw Auditorium.

Faculty/Staff Development

Mar. 2

The Center for the Enhancement of Teaching and Learning's IT Tuesday series hosts "Managing and Improving Students' Writing Assignments: Online Resources and Tools," at 11 a.m. For more information or to register, visit **www.cetl.gatech.edu**.

Mar. 3

The Office of Sponsored Programs hosts a brown bag on "Intellectual Property," at noon in the Research Administration Building. To register, call 894-6945 or e-mail nadia.zitman@osp.gatech.edu.

Miscellaneous

Feb. 24

The Spring meeting of the General Faculty Assembly will be from 3 - 5 p.m. in the Student Center Theater. Agenda posted on the faculty governance Web site: **www.facultysenate.gatech. edu**. For more information, e-mail said.abdelkhalik@me.gatech.edu.

Mar. 3

The Office of Human Resources will hold the second of two pre-retirement meetings, covering Teachers Retirement System benefits and optional/supplemental retirement benefits. These meetings are designed for employees within 10 years of retirement. To register, visit **www.trainsweb.gatech.edu.**

Mar. 9

Tech2Nite offers unique personal enrichment classes in Georgia Tech's new instructional facility, the Global Learning and Conference Center. The Spring Series examines the relationship between technology, communication, art, business and culture. Classes meet Tuesday nights from 6:30 -8:30 p.m. for six weeks. Members of the Georgia Tech community receive a special discount. For more information, visit **www.pe.gatech.edu** or call 385-3542.

Faculty and staff should send calendar items to **editor@icpa.gatech.edu** when available.

C L A S S I F I E D S

Appliances

Refrigerator, \$140; range, \$140; dishwasher, \$90; over-range microwave, \$90. All white, GE, excellent condition. Call Jon, 385-2395 or e-mail igetstuff@hotmail.com.

Kenmore electric washer and dryer. Solenoids and heating element 2.5 years old. \$75/pair, you pick up. Call 404-559-8761.

Whirlpool washer and dryer. Still under warranty; both bought in September 2003. \$500 for both. Call 385-6042 or e-mail angelo.bongiorno@physics.gatech.edu.

AUTOMOBILES

1994 Lincoln Towncar, signature series. Completely loaded. Excellent condition. 143K miles, \$3,500. Call Theresa Lummus, 706-663-2306.

1995 Honda Accord EX. Automatic, 4-door, gold, good condition, \$4,100. Call 894-2538.

1996 Mazda 626. Excellent condition, automatic transmission. 68K miles. Very clean. Dark green color, tinted windows, airbags. Alarm, new tires. \$6,300 OBO. Call 770-671-0272.

1997 Subaru Legacy L sedan. White, 74K miles, gray interior, AWD, automatic, cassette, new tires. Runs great, fun to drive. \$5,000. E-mail roger.narayan@mse.gatech.edu.

Computers

Dell Axim X5 (300Mhz) PDA with Windows Mobile 2003, cradle, charger, extra battery, foldable keyboard, NetGear 802.11b CF card, 28MB CF card and case. \$100. E-mail eric.logan@ce.gatech.edu.

Palm m130 with cradle/charger, Palm Bluetooth card, DataViz Desktop To Go software, and USB sync cable, \$75. E-mail eric.logan@ce.gatech.edu.

FURNITURE

Just one year old: maroon couch/loveseat, \$570; large glass dining table, 4 matching red chairs, \$250; queen bed, headboard, box spring, mattress, \$250. Negotiable. Contact Keiko, 770-723-9242.

Two brass table lamps with silk shades. Like new. \$50 for both. E-mail belinda.harding@dev.gatech.edu or call 894-1622.

Dining table w/6 chairs, \$175; crib w/ mattress, \$120; and much more. See photos at http://photos.yahoo.com/ batugunduz. Call 770-951-8186.

Oak living room furniture, complete set w/lamps, dining room table w/chairs and book shelves, \$750. Call 678-232-3475 or e-mail david.gifford@gtri.gatech.edu.

REAL ESTATE/ROOMMATES

3BR/2BA home for sale in Stockbridge, Swan Lake subdivision. Fireplace, one-car garage, lake privileges with swimming, fishing and playground, quiet neighborhood. Asking \$110K. Call 770-389-3497.

2BR/2.5BA townhouse in Smyrna/Vinings, corner unit, 12 miles from GT, located at 1747 Nappa Valley Ct. \$800/month, 1st and last due with lease. Call 770-428-4836.

Conyers: Lake-front w/dock, 4BR/2BA house for sale at \$180,000 or rent at \$1,200/month. Refrigerator, washer/dryer + yard service. Only 24 miles from campus. Call 894-9274 or e-mail allison.hickman@alumni.gatech.edu.

2-story Victorian home in Candler Park. Fully furnished (see www.ct02.gatech.edu/home). Walk to restaurants, park/tennis/pool, MARTA. Available in May, \$1,500/mo. + utils. Call 404-223-6227 or e-mail jb130@mail.gatech.edu.

Vacation rental in Grayton Beach, Florida. 3BR/2BA, w/2 porches available weekly or nightly. On Gulf Coast between Panama City and Destin. E-mail hdgentry@mindspring.com or call 404-636-3146. Midown condo for sale, less than 1 mile from Tech Square and 2 blocks from Piedmont Park. Completely renovated 2-story, 2BR/1.5BA, new appliances, sunroom. \$219,500. Call 404-874-8463 or e-mail bassydrew@yahoo.com.

Mountain home 60 miles north of Tech. 3-4BR/2.5BA, private 1 acre of forest. Oak floors, vaulted ceilings, stone and wood accents, decks. Tour at www.estesvr.com/residential/ benttree/3777-8bellevista.htm. Listed at \$395K, eager to sell. E-mail roessner@mindspring.com.

Miscellaneous

Hitachi 43-inch HDTV w/stand. Excellent condition, \$1,100. Call 678-232-3475 or e-mail david.gifford@gtri.gatech.edu.

1994 Honda Shadow. 700cc, 54K miles, well maintained, stored in garage, matching cherry red helmet included. \$1,000. Call 770-617-0855.

Gibson RB250 Mastertone 5-string banjo, excellent condition, beautiful tone, \$1,500. Call Dave, 770-491-6395.

Ads will run for a maximum of three issues. The Whistle reserves the right to edit ads longer than 30 words.